

REMARKS

Claims 1-30 are pending in the present application. In the Final Office Action mailed November 1, 2005, the Examiner rejected claims 1-15 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. The Examiner next rejected claims 1, 5-9, 12 and 15 under 35 U.S.C. §102(b) as being anticipated by Moore (USP 4,181,858). Claims 2 and 3 are rejected under 35 U.S.C. §103(a) as being unpatentable over Moore as applied to claim 1 above, and further in view of Toth (USP 5,457,724). Claim 4 is rejected under 35 U.S.C. §103(a) as being unpatentable over Moore and Toth as applied to claim 2 above, and further in view of Katsumata et al. (USP 4,558,458). Claim 10 is rejected under 35 U.S.C. §103(a) as being unpatentable over Moore as applied to claim 1 above, and further in view of Hsieh (USP 5,696,807). Claim 11 is rejected under 35 U.S.C. §103(a) as being unpatentable over Moore as applied to claim 1 above, and further in view of Lienard et al. (US Pub. 2003/0007603). Claims 13 and 14 are rejected under 35 U.S.C. §103(a) as being unpatentable over Moore as applied to claim 1 above, and further in view of Saunders (USP 4,896,343). Claims 16 and 22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Toth in view of Horiuchi (US Pub. 2002/0037067). Claim 17 is rejected under 35 U.S.C. §103(a) as being unpatentable over Toth and Horiuchi as applied to claim 16 above, and further in view of Moore and Sembriski (US Pub. 2003/0058994). Claim 18 is rejected under 35 U.S.C. §103(a) as being unpatentable over Toth and Horiuchi as applied to claim 16 above, and further in view of Hsieh. Claims 19 and 20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Toth and Horiuchi as applied to claim 16 above, and further in view of Zhou et al. (US Pub. 2002/0094064) and Grass et al (USP 4,578,806). Claim 21 is rejected under 35 U.S.C. §103(a) as being unpatentable over Toth, Horiuchi, Zhou et al, and Grass et al. as applied to claim 20 above, and further in view of Kendrick et al. (US Pub. 2003/0206614). Claim 23 is rejected under 35 U.S.C. §103(a) as being unpatentable over Toth and Horiuchi as applied to claim 16 above, and further in view of Moore. Claims 24, and 26-28 are rejected under 35 U.S.C. §103(a) as being unpatentable over Moore in view of Horiuchi. Claim 25 is rejected under 35 U.S.C. §103(a) as being unpatentable over Moore and Horiuchi as applied to claim 24 above, and further in view

of Mattson (USP 5,228,070). Claims 29 and 30 are rejected under 35 U.S.C. §103(a) as being unpatentable over Moore and Horiuchi as applied to claim 28 above, and further in view of Edholm et al (USP 3,755,672). Claims 4 and 21 are objected to because of informalities.

The Examiner objected to the drawings finding the contrast of Figs. 14 and 15 insufficient and because the equation " $E=R+H-C$," as defined on page 27, first paragraph, is believed not to correspond to Fig. 18 and the equation " $E=C-R-L$," as defined on page 27, second paragraph, is believed not to correspond to Fig. 19.

Applicant has enclosed replacement sheets for Figs. 14 and 15 with improved contrast. Regarding the objection that Figs. 18 and 19 do not correspond to the equations referenced by the Examiner, Applicant disagrees.

As shown in Fig. 18, C corresponds to the distance to the max center of the object. H reflects the height of the object as set off by the table. R corresponds to the distance from the bottom of the object to the object's midpoint, referenced at numeral 716 in the figure. Thus, adding H and R and subtracting that sum from C yields E. In other words, $C-H-R=E$, as set forth in first paragraph on page 27 of the application.

With regards to Fig. 19, R again corresponds to the distance from the bottom or top of the object to the object's midpoint, reference numeral 716, C corresponds to the distance from above the object to the max center of the object without the object being raised by the support or pillow 718, L corresponds to the measured distance to the max center of the object after being raised by the support or pillow. Thus, $C-L$ corresponds to the vertical or elevation offset of the object as a result of being positioned on the support or pillow. In this regard, $E=C-R-L$. The Examiner believes that not to be the case; however, the Examiner has failed to consider that E may be a negative number. That is, in the illustrated example, E is determined relative to C, which is measured from above the patient. Thus, if the object is lifted toward sensor 720 by a support or pillow, then the value of E will be negative reflecting that the distance between C and the object has been reduced. In other words, the object has moved closer to the sensor and that offset is reflected by E being a negative value. Accordingly, Fig. 19 is believed to properly reflect and correspond to the equation in the second paragraph on page 27 of the application.

Applicant has amended claims 4 and 21 to address the objections raised by the Examiner.

The Examiner next rejected claims 1-15 as failing to comply with the written description requirement. Specifically, the Examiner has concluded that the step of “comparing a position of a subject in a scanning bay relative to a reference position” is not described in the specification as “the original specification describes determining distance from a point relative to a reference point as exemplified on page 18, line 30 to page 19, line 21.” Office Action, November 1, 2005, p. 4.

It is well-established that “to satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention.” MPEP §2163, I. Applying this standard, it is clear that amendatory language added to claim 1 is supported by the specification. While Applicant believes that a skilled artisan would readily appreciate that the invention, when embodied in a method, includes the step of “comparing a position of a subject in a scanning bay relative to a reference position,” as called for in claim 1, Applicant refers the Examiner to the description of Fig. 11 in the specification. Specifically, Applicant, in describing a method for adjusting pre-imaging and imaging parameters, discloses that “from the two scout scans a centroid projection 302 is made” and “the distance of the centroid from a point of reference is made.” Application, p. 17, l. 30 – p. 18, l. 3. The specification further states that “the distance of the centroid from the point of reference is used to geometrically calculate an x and y centering error for the patient relative to a reference position 304.” Application, p. 18, ll. 9-10. A skilled artisan will conclude that to determine a “distance” is to make a comparison. That is, distance is “the length of the space separating two people, places, or things,” as defined by Encarta® World Dictionary at [www. encarta.msn.com](http://www.encarta.msn.com) (copy enclosed). Thus, to determine the distance, by definition, includes a step of comparison. Accordingly, claim 1 is believed supported by the specification. Withdrawal of the rejection thereto under 35 U.S.C. §112, first paragraph, is therefore requested.

Applicant incorporates the remarks set forth in the Response filed on August 9, 2005 with respect to the rejection of the claims under 35 U.S.C. §§102, 103. Therefore, for purposes of this Response, Applicant will respond to the comments the Examiner made in the Response to Arguments section of the November 1, 2005 Office Action.

In responding to the remarks made with respect to claims 1 and 24, the Examiner concluded that the shadow-casting technique disclosed by Moore anticipates the claimed invention because “the region of maximum attenuation is the region covered by the entire patient (fig. 2a, #3) relative to the region not covered by the patient, such as air.” Office Action, November 1, 2005, p. 18. Therefore, the Examiner concluded that “Moore discloses comparing (fig. 5, #36) and adjusting (fig. 5, #26 and 30) based on the determined region (fig. 2a, #3) of maximum attenuation.” Id.

By definition, determining a region of maximum attenuation of the subject, the subject must have a region of non-maximum attenuation; otherwise, the subject would not have a maximum attenuation. The subject would have a constant attenuation. Additionally, the Examiner has concluded that Moore is pertinent because it discloses a technique for determining the position of a patient and, thus, determines a region of maximum attenuation (the patient) relative to non-maximum attenuation regions (air). However, “air” is not of the subject. Claim 1 calls for determining a maximum attenuation of the subject, not the maximum attenuation of everything disposed within a scanning bay. Thus, to conclude that differentiating between patient and air constitutes “determining a region of maximum attenuation of the subject” is to ignore that which is explicitly called for in the claim. Again, a region of maximum attenuation of the subject is determined. This is an element that cannot be ignored and must be given patentable weight. Therefore, Applicant believes that claims 1, 5-9, 12, and 15 are in condition for allowance.

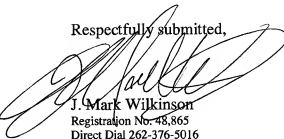
In responding to the remarks presented with respect to claim 16, the Examiner concluded that “Toth discloses a system for estimating the physical center of a patient based on orthogonal projections. This estimated center is the assumed position of the maximum attenuation in Toth.” Office Action, November 1, 2005, p. 19. Claim 16 has been amended to call for a processor to determine a position of maximum attenuation of a

subject to be scanned. As such, the claim is explicit that the processor determines the position of the maximum attenuation of a subject. In contrast, Toth estimates the physical center of the patient and assumes that the physical center of the patient is the position of maximum attenuation. Presuming a characteristic of an object is not the same as determining that characteristic. "Determine" is defined as "to decide or settle something conclusively". (see enclosed). Thus, to presume is the opposite of to determine.

Therefore, in light of at least the foregoing and that previously presented on August 9, 2005, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 1-30.

Applicant appreciates the Examiner's consideration of these Amendments and Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,



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distal
distance
distance casting
distance learning
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distant
distantly
distaste
distasteful
distemper (1)



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dis-tance

noun (plural dis-tanc-es)

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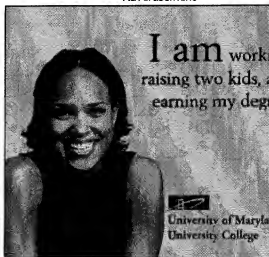
1. length between two things: the length of the space separating two people, places, or things
 • *What's the distance between Paris and New York?*

2. far-off place: a place or position far away or not very close
 • *It's best seen from a distance.*

3. closeness allowing some activity: the space between two people, places, or things with regard to activity carried on between the two
 • *We can do nothing until they're within hailing distance.*

4. amount of separation: the amount by which two places are separated, especially when thought of in terms of the time or inconvenience of a journey between the two
 • *She lives some distance away.*

5. coolness or aloofness: a cool or slightly aloof response to another person



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determine

determination

determinative

► determine

determined

determiner

determining

determinism

deterministic

deterrent

detest

detestable

determine

de-ter-mine (*past and past participle de-ter-mined, present participle de-ter-min-ing, 3rd person present singular de-ter-mines*)

verb

Definitions:

- 1. transitive verb decide something:** to decide or settle something conclusively
- 2. transitive verb find out something:** to find out or ascertain something, usually after investigation
- 3. transitive verb influence something:** to influence or form something
- 4. transitive verb set limits of something:** to establish and set the limits or form of something

- 5. transitive and intransitive verb adopt purpose:** to adopt a set purpose, or make somebody do this
 - *determined to leave as soon as possible*

- 6. transitive and intransitive verb LAW end:** to end something, or come to an end

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